

CLAIMS

1. An electrostatic precipitator comprising a conduit for the passage of particles in an air flow and means generating an electrostatic field, substantially orthogonal to the air flow, and an ion supply, capable of charging said particles, in which the generating means comprise a point electrode and a two dimensional surface electrode, characterised in that the plane surface electrode comprises an ion source and the point electrode comprises a counter electrode and in that the counter electrode is earthed.
2. A precipitator according to Claim 1, in which the conduit comprises a hollow cylinder and the two dimensional surface electrode is adapted to cover at least a part of the inner surface thereof.
3. A precipitator according to Claim 1, in which the conduit is a hollow parallelepiped and the two dimensional surface electrode is adapted as a plurality of single polarity electrodes on one or more inner surfaces of the conduit.
4. A precipitator according to any preceding Claim, in which the counter electrode is co-axially mounted with the conduit.
5. A precipitator according to Claim 5, in which the counter electrode comprises a wire, pin or rod.

6. A precipitator according to any of preceding Claim, in which the two dimensional surface electrode comprises a plasma charger.

7. A precipitator according to any preceding Claim, in which the air flow is substantially free from turbulence.

8. A precipitator according to any preceding Claim, comprising second means generating an electrostatic field.

9. A precipitator according to Claim 8, in which the second generating means comprise a second point electrode co-axially mounted with the conduit.

10. A precipitator according to Claim 9, in which the second generating means further comprises a ring electrode or a plurality of single polarity ring electrodes.

11. A precipitator according to Claim 10, in which the second point electrode is an earthed electrode.

12. A precipitator according to any preceding Claim, further comprising means for delivery of a liquid to one or other or both of the point electrodes.

13. A precipitator according to Claim 12, in which the one or other or both electrodes comprise a liquid delivery channel.

14. A precipitator substantially as hereinbefore described with reference to, and as shown in, the accompanying drawings.